

services is determined by household income. In the case of a great number of legal services they provide, this is fair and appropriate in ensuring that people who live at or below the poverty level have access to legal services.

But for women fleeing abuse, the situation becomes complicated. Often these women do not have independent income, so the household income counted against her is that of the alleged abuser. This legislation would make certain that these women do not have to be denied legal services because of their spouse or partner's income.

As the new welfare law goes into effect, domestic violence victims will be among those hardest hit. More than 2 million women are abused by their husband or partner each year. It has been reported that more than half of the women currently receiving government assistance cite domestic violence as a factor.

We are responsible to do everything within our power to help victims of domestic violence escape abuse and start on the path to self-sufficiency. This is just one step on that path and I hope you will join me.

MICHAEL MANLEY: PATRIOT OF  
JAMAICA

HON. CHARLES B. RANGEL

OF NEW YORK

IN THE HOUSE OF REPRESENTATIVES

*Thursday, March 13, 1997*

Mr. RANGEL. Mr. Speaker, I join Michael Manley's many friends and admirers who mourn his loss in paying tribute to his remarkable life. Michael was my friend for more than 20 years and I greatly admire his visionary and inspirational leadership. He was a delightful personality with wide ranging interests who was always aware of, and involved in, the issues of the day. He was a committed patriot of Jamaica, a man of the Caribbean, and a person who represented all who struggled for justice, equality, and opportunity.

Michael was a teacher and a leader on the issues which have defined the challenge facing developing nations as they move from political independence toward sustainable development and economic viability. Michael had the capacity to envision a better world for all, the ability to articulate his vision, and the leadership to inspire us individually and collectively to aspire to goals beyond our reach.

Michael Manley's leadership was a global significance and impact. His struggle against apartheid in South Africa was internationally recognized by the award of the United Nations Gold Medal in 1978—the highest award of the Special Committee Against Apartheid. In addition, his work on economic issues, particularly the New International Economic Order, and the external debt problem of developing nations, marked him as one of the preeminent international political and economic thinkers of the contemporary era. His prolific writings on economics and politics include *Poverty of Nations*, 1991; *Up and Down Escalator*, 1987; *Jamaica Struggle in the Periphery*, 1982; *A Search for Solutions*, 1977; *A Voice of the Workplace*, 1973; and *Politics of Change*, 1973. He was a visiting professor at, and received honorary doctorates from, numerous institutions of higher learning in the Caribbean, Great Britain, and the United States.

Although retired from political life since 1993, he continued to be active in public af-

fairs. Michael Manley played a pivotal role in the restoration of democracy to Haiti and the transition to majority rule in South Africa, to which he led the Commonwealth Observer Mission that won praise from the new Government of South Africa.

I had the opportunity to work particularly closely with Michael in recent years, in the restoration of Haitian democracy, and I can personally attest to his influence in mobilizing the Organization of American States and the United Nations to become engaged in negotiating the return of President Aristide to complete the term to which he was elected as President of Haiti. Michael Manley showed me his commitment to justice and his love for the Caribbean as he applied his formidable intellectual and persuasive powers to the cause of democracy in Haiti. He had similarly committed a good portion of his public life to the struggle for self-determination in Africa and especially was a leader in the effort to end apartheid and bring about majority rule in South Africa.

Michael's global view did not make everyone comfortable. In the 1970's, the United States Government opposed his friendship with Cuba and his support of the Cuban troops sent to Angola to stop the advance of the South African apartheid regime. Michael suffered the wrath of the United States for his independence and was labeled a Communist sympathizer.

Michael was more than a Jamaican, more than a man of the Caribbean; he was a man with a global reach and vision who saw the challenge of reducing the great and tragic gap between the rich and the poor through the creation of a new international economic order.

Michael had the capacity to learn and change, to adopt new tactics to accomplish his goals in recognition of new and different circumstances. His economic message changed from the 1970's when I first met him and defended him against charges that he was a Communist. In the 1990's he emphasized private sector-led growth and development. Throughout he was a prime minister beloved of his people because he opened opportunities for participation to the disadvantaged and removed historical disabilities of gender, class, and privilege.

His loss will be felt in Jamaica, the Caribbean, the hemisphere, and throughout the world. Michael Manley's intellect, energy, and passion were universal in their commitment to freedom, equality, and justice. His extraordinary impact will be forever remembered.

THE CHANGING ROLE OF ENERGY  
COMPANIES

HON. SHEILA JACKSON-LEE

OF TEXAS

IN THE HOUSE OF REPRESENTATIVES

*Thursday, March 13, 1997*

Ms. JACKSON-LEE of Texas. Mr. Speaker, I rise to speak on the changing role of energy companies in the United States as we look forward to the 21st century. It is ever apparent that we, as a country, are in the process of change. Technology is shaping the future of not only the way we think, but also the way we act and react to information that we receive and put out.

There is no doubt that energy companies, like other industries that touch the lives of

people across the globe, must change and adapt to meet the growing needs of people in a world that is affected by new technology daily. In fact, some may say that we are in the process of a new revolution; an information revolution.

Mr. Speaker, on this subject, I would like to introduce into the record an insightful speech by Philip J. Carroll, the president and CEO of Shell Oil Co., on *Adapting to a Revolution: The Challenges Facing Energy Companies in the 21st Century*.

ADAPTING TO A REVOLUTION: THE CHALLENGES  
FACING ENERGY COMPANIES IN THE 21ST CENTURY

(By Philip J. Carroll)

INTRODUCTION

I have been invited here today to talk to you about one man's view of energy companies as we near the close of the 20th century and begin looking forward to the 21st. It's somewhat awkward standing before an energy audience at the end of the 20th century. I feel a bit like a Trannosaurus Rex in a Gary Larson cartoon speaking before the Society of Late Cretaceous Dinosaurs on "How to Enjoy the Cooler Weather"—he had the idea right, but didn't fully understand the implications of what was going on in his environment.

While there are no meteors crashing down from the sky, we all know that we are nonetheless in the midst of a change in our environment—a true revolution. This particular revolution is the "information revolution" and I want to talk to you about how it will change our markets, our organizations, and most importantly, how it will impact you individually.

A revolution is a brief period of time where the whole nature of a system makes a radical transformation from the way things "are" to the way things "will be." A revolution usually begins when existing institutions fail to meet the present needs. When coupled with a vision of the way things "ought to be" from forces outside the establishment, a revolution results in great turmoil as the opposing sides struggle to define the future.

I believe that a dominant theme of this revolution will be to place less value on physical assets and much more value on human. This will mean that our organizational structures, and the people within them, will have to adapt rapidly to changing and increasingly competitive markets.

BACKGROUND

Allow me to go back in history a bit to try to set the stage. Humankind spent thousands of years making the first revolutionary transition from hunting to farming. This time scale was so long, that its study is relegated mostly to the field of archeology. Life during the agrarian age was simple, but quite hard. People toiled physically day in and day out, just to provide for the basic human needs of food and clothing. Change continued during this age as organizations moved from large feudal systems to single family farms. With each change came new responsibilities, but also new freedoms and opportunities. In spite of the drawbacks and tough conditions, the human welfare was nonetheless improved as civilization continued to grow.

The next revolution, the industrial revolution, was a phenomenon principally of the last century. It began at the dawn of the 19th century with the introduction of simple machines in the British textile mills, and the perfection of the steam engine in the British coal industry—both of which substantially reduced production costs. Although commerce itself had been around for thousands of years, these new industrial capabilities

caused the birth of new industrial enterprises. The changes had a profound effect on society as people began to move away from the farms and into the factories. Although this revolution was also fraught with turmoil, once again the overall physical condition of humanity improved.

The essence of the industrial age was the physical transformation and transportation of goods and services. It was characterized by big physical "machines" that changed raw materials into physical products. There was no missing this revolution—it changed the skyline of civilization around the planet and it changed it rapidly. The energy industry was central to this age because energy itself was at the very heart of the revolution, it was the common requirement for running the machines that changed and moved things.

#### NEW MARKETS

Now, the experts tell us we are in the midst of the "information revolution." It is a bit harder to see on the city skylines, but it is no less real. The industrial revolution was about applying physical leverage, a multiplier for the power of human muscle. The information revolution is all about intellectual leverage, a multiplier for the power of the human mind.

It is easy to see how the information technology industry itself will be central to this revolution. However, the information revolution will also profoundly affect the energy industry, just like the industrial revolution changed the way we farm.

The demand for food did not go away at the end of the agrarian age the means of production and delivery simply changed. The industrial age dramatically lowered the costs of food production. First farm machinery, and then new chemicals increased crop yields on both a manpower and acreage basis. We also saw a whole new service sector develop in the form of highways and supermarkets for the transportation and delivery of food products. You could still get your green beans before and after the revolution, but now you could buy them fresh, frozen, or in a can.

Likewise, the basic need for energy will not dissipate in this revolution. However, energy products and services will change form as this current revolution has profound effects on the drivers of both supply and demand.

On the supply side, information technology will dramatically reduce the costs of finding and extracting conventional fossil fuels. 3D seismic, horizontal drilling, and deep water structure design are all examples where information technology has been a multiplier for the human mind. Information technology will also reduce the costs of transforming these raw materials into various conventional products such as gasoline and electricity. Furthermore, information technology could become the critical cost reduction enabler which finally makes renewable energy resources such as solar, wind, and biomass economically viable.

The very same forces will also cause fundamental changes to the demand side of the energy industry as well. We will see new demands emerge in both industrial and residential consumer markets. These demands will be driven by new work processes and lifestyles which are themselves influenced by the changes in information technologies.

For all the debate about electric versus gasoline cars, how many of us truly understand the ramifications of consumers who can choose between bringing to the theater, or bringing their next entertainment experience home with the click of a mouse? Even if motor transportation demand shifts away from gasoline and into electricity, will con-

sumers choose to purchase it at a quick-charging station, or will they plug in at home? How will they prefer to pay for it?

One way or another, the marketplace will continue to demand energy. The question is simply one of form. Products will become replaceable with services. The information revolution means that the "value add" no longer has to be a physical product—it can be information, or the "service" that accompanies the "product."

I enjoyed a recent example from my colleague Robert Shapiro of Monsanto. He offers that the chemical products division of our industry could move away from producing chemical sprays for crop protection. In its place, we should be able to add value by inserting information directly into the plant to serve the same purpose. Thus, genetic engineering, or rearranging the information in a plant, becomes a competitive "service" to chemical "products."

Even the traditional "services we have provided will change. Although the industrial revolution brought us a broad diversity of service choices, when compared to the information revolution, the industry was characterized by relative sameness. The age was defined by mass replication of a particular product or service. You wanted gasoline in your car, there was only one means to get it, drive to a corner filling station. You could fill up at my pump or someone's else's, but for all practical purposes, the delivery system was the same.

In the future, some consumers will choose to purchase their energy in one form delivered in one particular way. At the same time, others may choose both a different product and a different delivery service. This diversity of demand will only increase the opportunities for a wide variety of businesses to enter and thrive in the marketplace.

As in the case of the genetically engineered plant, it also means that our competition will be harder to define. The "fully-integrated major" model which was well suited for the industrial age is already breaking apart. "Independents" are a major force in the upstream sector once dominated by majors. Likewise, they are a growing force in the downstream sector as well.

We also see changes in the traditional roles of the "operating" and "service" sectors as "service companies" begin to participate in investment risks for a share of the rewards. The change will continue as "operating companies" begin to offer services to the broader industry. Shell's newest independent subsidiary, Shell Service Company, is today offering a broad array of information technology and business processing solutions to the entire energy industry.

#### STRUCTURES

As the old adage goes, "form follows function." If the processes driving supply and demand in the marketplace change, then it stands to reason that the structural forms around which we organize ourselves are also subject to change. Organizations of the industrial age were modeled after machines they operated. We built clearly defined hierarchies with assigned responsibilities to carry out specific tasks in specific ways. This was well suited to machinery which, once constructed, would continue to produce the desired output in a very predictable way.

Allow me to present a new model for information age organizations through the use of a metaphor. Our conventional description of chemical compounds consists of the elements of which they are made. In the energy industry, our personal favorite compounds, hydrocarbons, are made of hydrogen and carbon atoms. Yet, they are more than just random mixtures of carbon and hydrogen. Their value is not contained in the physical par-

ticles of which they are made, it lies in the bonds that hold them together. Break the bonds or recombine them in different ways, and you get valuable substances which can be converted into either energy or products. Someone is willing to pay good money for these mixtures, not because of their raw carbon and hydrogen content, but rather because of the special nature of the bonds which hold them together.

A "bond" is truly "information" in its purest form. It is a rule by which two "things" are connected to create value. A system of bonds between many things may then be called a "network." A molecular "network" actually contains very little physical substance. That which appears to be a thing—is little more than a bit of substance connected by bonds in a very special way. The relationships, or networks, contain all the value. The information revolution can thus be thought of as focusing on the relationships between things, rather than the things themselves for that is where the "information" lies.

A study of "things" of the highest form, living creatures, yields two additional observations. First, the bonds in "living things" contain a great deal more information. DNA is a lot more complicated than polyester. Secondly, living things change, they are capable of adapting to changes in their environment. A living tree puts out new leaves when the weather warms up in the spring. A dead log simply decays on the forest floor.

I therefore propose that if the energy industry wishes to thrive—not decay—it must change and adapt. Specifically, I believe that we must alter our model whereby value is primarily extracted by finding or owning a physical asset. We must modify it to become a model where one can also add value by establishing relationships with an asset's owner which leverage one's human talent. The information age in our industry will increasingly be characterized by a shift away from the physical—and towards a focus on human assets. It's no longer just the things, refineries, chemical plants, or oil fields, but also the skills applied to them that creates value. How we build the bonds, relationships, and networks between organizations in order to add value to an asset—regardless of present ownership—will be the key to information age economic success.

The simplest forms of such new relationships would be alliances. Alliances can take the form of any partnership between suppliers, customers, and even competitors. An alliance can form any time there is an opportunity to survive or thrive which is enhanced by being together rather than remaining apart. A good alliance will be one which causes market information to flow more efficiently and effectively so that organization may adapt.

As you all know, Shell has a keen interest in alliances. We are already moving beyond the early stage of customer/supplier alliances and beginning to explore competitor alliances in both our upstream and downstream businesses. Our first E&P venture with Amoco in the Permian Basin should be closing very shortly now. We are developing a similar relationship with Mobil in California, and are working diligently on a new downstream alliance with Texaco covering the whole United States. These alliances are our first efforts towards creating flexible and adaptable business structures positioned to maximize value in the information age.

#### PEOPLE

Just as the industrial revolution changed the lives of people everywhere, so will the information revolution affect our lives as well. As the working class moved from the farms to the factories, they had to learn new behaviors and skills. Despite the similarity of

human tasks involved with operating a plow and a machine, this transition was very painful. Early 19th century Britain had to deal with the Luddites, a group of people so concerned about the replacement of human labor by machines that they resorted to sabotage.

The Luddites did not succeed in stopping the last revolution, and none of us will be able to resist this one. We must make the choice to adapt or die.

First, each of us will need a more diverse set of business and technical skills than we presently employ. The skills needed at any given time will change rapidly depending on market opportunities. Second, we will need the ability to both attract and release talent dependent on the changes. Third, each of us must also realize that we must individually grow to meet the ever changing market demands. The capacity and willingness to learn will likely be the most important characteristics of successful people in the information age.

Finally, the behaviors suitable to these new organizations will be fundamentally different than in large industrial "machines." Incenting and compensating people for efficient repetition of prespecified tasks is not necessarily a winning proposition. Results-oriented variable compensation and portable benefits are almost certain to be part of our future.

You may take some comfort in knowing that all of these revolutions have been scary to the people experiencing them. Nonetheless, they have all improved society in the end. Their common impact on people has been an increased role of choice, freedom, and responsibility. No longer will it be "the machine" which determined your future for you. You will have to make choices about where you think your talents will be the most valued. You will then have a greater role in educating yourself in order to aspire to these new opportunities. You alone will be responsible for the outcome. You will all have the freedom to choose your own destiny. Good choices will yield great rewards.

#### CONCLUSION

Soon, this dinosaur standing before you today will be gone. But many of you will remain behind. You will make many choices that will determine not only your own future, but that of the people and the organizations around you. I don't claim to have a crystal ball about what that future looks like, but I do believe that if you seize control of it, the opportunities for greatness are abundant.

No matter what the precise outcome, I expect to find that successful organizations and people of the future will be the ones who best adapted to this time of great change. The age ahead will be characterized by a declining focus on physical assets, and an increased emphasis on diverse human skills. The need for energy in the information age will not dissipate, but it will change form.

The road ahead is certainly fraught with peril, yet ripe with opportunity. If we remain rigid and resist, like the Luddites, the only place they will find us in the future is the history books. For those who choose to learn and grow, the future looks very bright from where I stand.

Thank you for having me here today, enjoy the revolution, and good luck with your future.

#### TRIBUTE TO MATHEW J. GABERTY

SPEECH OF

HON. DAVID E. BONIOR

OF MICHIGAN

IN THE HOUSE OF REPRESENTATIVES

*Wednesday, March 12, 1997*

Mr. BONIOR. Mr. Speaker, I rise today to pay tribute to my good friend Mathew Gaberty. He is being honored on Wednesday, March 12, 1997, at The Daughters of Isabella, Queen of the Skies Circle No. 683 annual testimonial dinner in Mt. Clemens. This event is held each year to recognize a community leader for outstanding service and to raise funds for charity.

Taking an active role in one's community is a responsibility we all share, but few fulfill. Mat has dedicated much of his life to this endeavor. He found the Mat Gaberty Heart Fund in 1981 with the aim of fighting heart disease. The Mat Gaberty Annual Gold Classic has become the largest single day fundraiser to combat heart disease. The renowned Mat Gaberty Heart Institute of Mount Clemens General Hospital was opened in 1989 and has become a major center for open heart surgery. His time, talents, and energy are appreciated by all of us. I thank Mat for all his efforts and commend him for his good work.

Mat Gaberty has more than fulfilled his civic responsibilities. He was elected for four terms to the Macomb County Board of Commissioners. He served 11 years on the Macomb County Parks and Recreation Committee, and 9 years on the Macomb County Retirement Board. He has also served as a Macomb County Commissioner, 8 years as chairman and 5 years as vice chairman. He was co-founder of the Urban County Road Association and served as chairman of the Inter-County Road Commission. I deeply admire his strong values and outstanding example of civic involvement.

I applaud the Daughters of Isabella for recognizing Mat Gaberty. He has provided leadership to our community and I know he is proud to be honored by this fine organization. On behalf of the Daughters of Isabella, Queen of the Skies Circle No. 683, I urge my colleagues to join me in saluting Mathew Gaberty.

#### ITALY'S HIGH SCHOOL'S BOYS BASKETBALL TEAM

HON. MARTIN FROST

OF TEXAS

IN THE HOUSE OF REPRESENTATIVES

*Thursday, March 13, 1997*

Mr. FROST. Mr. Speaker, I rise today to pay tribute to the Italy Gladiators, an amazing high school basketball team located in my district. On Saturday, March 8, in Austin, TX, the Italy Gladiators defeated Vanderbilt Industrial 71 to 63 to capture the 2-A State championship.

The Italy Gladiators advanced to the State playoffs for the first time since 1968. Italy's record for the 1996-97 basketball season was an impressive 27-4, and senior guard Keith Davis led Italy in the championship game with 27 points and was named the game's most valuable player. Keith was also named to the all-tournament team, along with Kenneth Wallace and Jontae Anderson.

My congratulations to the 1996-97 Italy Gladiators: Don Clingenpeel—coach; Kyle

Holley—coach's assistant; Josh Droll, Nick Clark, Dennis Copeland, Brian Weaver, Donnie Clingenpeel—managers; Jontae Anderson, Kenneth Wallace, Keith Davis, Dejuan Davis, Chris Boyd, Jordan Huggins, Randy Johnson, Jason Uehlinger, Michael Shelby, Nick Cooper, David Weaver, Edwin Wallace, and Sam Owen.

#### RENEWAL ALLIANCE—A BETTER WAY

HON. RON PACKARD

OF CALIFORNIA

IN THE HOUSE OF REPRESENTATIVES

*Thursday, March 13, 1997*

Mr. PACKARD. Mr. Speaker, today I will join 27 of my colleagues at the Washington, DC, Darrel Green Learning Center for Underprivileged Children to kick-off a series of events designed to promote charitable, community, and faith-based solutions to some of our Nation's most intractable problems.

Washington bureaucrats took their crack at it with dismal results, wasting billions of dollars and destroying lives. We know there is a better way. My colleagues and I formed the Renewal Alliance to take that message across the Nation.

Currently, the newly formed alliance comprises 28 Congressmen and Senators who plan to highlight community efforts to solve poverty, repair broken families, end substance abuse, and a host of other problems.

The welfare reform critics think one way—Washington's way or no way. The fact is, folks across the country work everyday to touch lives and restore hope with phenomenal results. A volunteer's compassion, dedication, and genuine desire go much further than a nameless, faceless check from Washington.

I have served at the local level as a mayor, a school board member, a chamber of commerce board member, part of the Cub Scouts and been active in my church. I can attest to the power of the individual, and to what we can do when we work together. Our Government must support rather than replace faith, family, work, and community.

#### TRIBUTE TO A GREAT CIVIL RIGHTS LEADER

HON. STENY H. HOYER

OF MARYLAND

IN THE HOUSE OF REPRESENTATIVES

*Thursday, March 13, 1997*

Mr. HOYER. Mr. Speaker, it gives me great pleasure to rise today with my colleague from Texas, Ms. JACKSON-LEE, to honor a lifelong crusader for civil rights, Arnold Aronson, as he celebrates his 87th birthday. His distinguished career in civil rights began nearly 60 years ago and he has been at the center of nearly every major civil rights fight since the New Deal.

Most notably, Mr. Speaker, Mr. Aronson was one of the founders of the Leadership Conference on Civil Rights in 1950. The single-most important event forming this conference was a historic gathering of over 4,000 delegates from 33 States in Washington, DC, to protest racial injustices throughout the Nation. Arnold Aronson and Roy Wilkins organized this, the national emergency civil rights